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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,246	09/27/2002	Keith Glenn Mattson	201-0645 GAS	2133
28549	7590	11/22/2005	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			BOEHLER, ANNE MARIE M	
			ART UNIT	PAPER NUMBER
			3611	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/065,246

Applicant(s)

MATTSON ET AL.

Examiner

Anne Marie M. Boehler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-22 is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 8, 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Asanuma (USPN 5,576,957).

Yamamoto teaches a power steering control system including a lateral dynamic sensor (lateral acceleration sensor 17), a steering wheel angle sensor 15, a road wheel angle sensor, a yaw rate sensor 18, and a controller responsive to all of the sensors for determining a corrected steering wheel input (at step 4). The controller in reaction computing unit 23 determines a desired yaw rate in response to steering angle. A modified steering wheel input T2 is determined as a function of the desired yaw rate. The corrected input is also responsive to the reaction steering input determined at 23 and therefore is responsive to actual and desired yaw rate.

Yamamoto is silent regarding a road wheel sensor.

Asanuma shows a steering system using various sensors, including a steering wheel angle sensor 16 and front and rear wheel road angle sensors 14, 15, for determining required power assist.

It would have been obvious to one of ordinary skill in the art to provide the Yamamoto steering system with a road wheel angle sensor, as taught by Asanuma, in order to provide position feedback to the controller.

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3. Claims 2-4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Asanuma as applied to claims 1, 5, 8, 9, and 12-19 above, and further in view of Klosterhaus (USPN 5002142).

Yamamoto discloses only one front wheel steering motor.

Klosterhaus shows a power steering system using a pair of front wheel steering assist motors to control left and right front wheels.

It would have been obvious to one of ordinary skill in the art to provide the Yamamoto steering system with two front wheel steering motors, as taught by Klosterhaus, in order to separately control wheels on left and right sides of the vehicle, for better cornering control.

4. Claims 6, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Asanuma as applied to claims 1, 5, 8, 9, and 12-19 above, and further in view of Serizawa.

Yamamoto discloses front wheel steering only.

Serizawa discloses steering rear wheels in response to various control factors, including yaw rate.

It would have been obvious to one of ordinary skill in the art to control rear vehicle wheels using the Yamamoto control operation, as taught by Serizawa, in order to provide better vehicle control.

5. Claims 14-22 are allowed.


6. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M. Boehler whose telephone number is 571-272-6641. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6612. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 11/14/05  
Anne Marie M. Boehler  
Primary Examiner  
Art Unit 3611

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